

Remarks

This response is submitted within the shortened statutory period of three months to respond to the office action dated December 3, 2003. Therefore, no petition and fee for extension of time is filed with this response.

I. Claims

Hereinafter, the claims that are pending prior to the entry of the amendments in this response are called "currently pending claims". This response amends Claims 1, 3-4, 7-8 and adds new Claims 22-26. No Claims are canceled. After amendment this application will have nine independent Claims (currently amended Claims 1, 3, 4, 7, currently pending Claims 12, 19 and new Claims 22, 23, 25) and a total of 26 Claims (currently amended Claims 1, 3, 4, 7, and 8, currently amended Claims 2, 5, 6, and 9-21, and new Claims 22-26). Applicants previously paid for up to 21 total Claims and six independent Claims. Therefore, a fee for excess Claims is filed with this response.

II. Claims Support

The Support for amended Claims 1, 3-4, 7-8 and new Claims 22-26 can be found inter alia in the originally filed Specification and Claims as follows:

- Claim 1: original Claim 1 and page 12 line 25 to page 14 line 1.
- Claim 3: original Claim 3 and page 12 line 25 to page 14 line 1.
- Claim 4: original Claim 4 and page 12 line 25 to page 14 line 1.
- Claim 7: original Claim 7 and page 12 line 25 to page 14 line 1.
- Claim 8: original Claims 8 and page 14 lines 16-18.
- Claim 22: original Claims 1 and 2.
- Claim 23: original Claims 4 and 5.
- Claim 24: original Claim 6.
- Claim 25: original Claims 7 and 9.
- Claim 26: original Claim 10.

III. Claims objections under 37 C.F.R. § 1.75(c)

The Examiner objects to Claims 8 and 11 in item 1 of the Office Action under 37 C.F.R. § 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous Claim. Applicants amended currently pending Claim 8 to place the Claims in proper dependent form. Amended Claim 8 refers to "a lithium ion polymer battery assembly comprising the high crystalline polypropylene separator and gel phase polymer electrolyte" and is dependent upon independent Claim 7. Amended Claim 8 limits further the subject matter of independent Claim 7. Claim 11 also limits further the subject matter of amended Claim 8. Applicants submit that the amended Claim 8 overcomes Examiner's objections to Claims 8 and 11 under 37 C.F.R. § 1.75(c).

IV. Allowable Subject Matter

The Examiner acknowledges in item 5 of the Office Action that original Claims 12-21 are allowable. The Examiner further indicates in items 6 of the Office Action that original Claims 2, 5, 6, 9, 10 would be allowable if rewritten in independent form including all the limitations of the base claims and any intervening Claim. Applicants submit that new Claims 22-26 correspond to Claims 2, 5, 6, 9, and 10 in independent form including all the limitations of the base Claims and the intervening Claims. Applicants submit that new Claims 22-26 are therefore allowable as well.

The Examiner acknowledges in item 8 of the Office Action that the prior art of record fails to teach and/or suggest a high crystalline polypropylene separator for a lithium ion polymer battery having an air permeability of 500 sec/100 cc or less. Further, the prior art fails to teach the multi-component microporous membrane and process of preparing the membrane having the components as set forth in the instant Claims. Applicants agree with the Examiner in this point entirely.

V. *Claims rejections under 35 U.S.C. § 102*

1. *Claim Limitations of amended Claim 1*

A high crystalline polypropylene microporous membrane having

- a crystallinity of 50% or more,
- isotacticity (pentad fraction) of 95% or more,
- an atactic fraction of less than 5%,
- a density of 0.905 g/cm³ or more,
- a melting temperature of 164 °C or more, and
- a crystallization temperature of 125 °C or more.

Amended Claims 3, 4, and 7 have the same limitations.

2. *Claims Rejection under 35 U.S.C. § 102(b) in view of Zimmerman*

The Examiner rejects currently pending Claims 1, 3, 4, and 7 in items 1 and 2 of the Office Action under 35 U.S.C. § 102(b) in view of U.S. Patent No. 3,801,692, hereinafter called "Zimmerman". The Examiner asserts that currently pending Claims 1, 3, 4, and 7 are anticipated by Zimmerman. Applicants respectfully traverse the Examiner's assertion for the following reasons.

The Applicants submit that Zimmerman discloses:

A process for making open-celled microporous film of crystalline polypropylene having,

- a crystallinity of about 60 %
- a density of 0.92 and
- is melt extruded at 225 °C.

See Example I.

However, Zimmerman does not disclose a high crystalline polypropylene having a isotacticity (pentad fraction) of 95% or more, and an atactic fraction of less than

5%. Zimmerman further does not disclose a crystallization temperature of 125 °C or more.

Applicants respectfully submit that Zimmerman does not anticipate amended Claims 1, 3, 4, and 7.

Applicants further submit that Zimmerman does not teach or suggest a high crystalline polypropylene having isotacticity and an atactic fraction as recited in amended Claims 1, 3, 4, and 7. Therefore the independent Claims 1, 3, 4, and 7 are non-obvious in view of Zimmerman as well.

3. *Claims Rejection under 35 U.S.C. § 102(b) in view of Demeuse*

The Examiner rejects currently pending Claims 1, 4, and 7 in items 3 and 4 of the Office Action under 35 U.S.C. § 102(b) in view of U.S. Patent No. 6,232,402, hereinafter called "Demeuse". The Examiner asserts that currently pending Claims 1, 4, and 7 are anticipated by Demeuse. Applicants respectfully traverse the Examiner's assertion for the following reasons.

The Examiner asserts that Demeuse discloses an isotactic polypropylene having a high crystallinity of at least 93% and preferably of at least about 95% in column 4, lines 13-45.

Applicants submit that Demeuse discloses a biaxially oriented film comprising of a polyolefin mixture consisting essentially of 75-92% by weight of isotactic polypropylene, 5-15% by weight of low density polyethylene and 3-10% by weight of an olefin heteropolymer containing polypropylene. See Claim 1 of Demeuse.

Applicants further submit that Demeuse discloses films based on three component polyolefin blend. The polymer blend contains isotactic polypropylene, low density polyethylene and an olefin heteropolymer. See Example 1 of Demeuse. Demeuse discloses that the isotactic polypropylene in

the blend has an isotactic index of at least 93%, preferably at least 95%. See Columns 4, lines 31-32.

However Demeuse does not teach a high crystalline polypropylene microporous membrane having

- a crystallinity of 50% or more,
- isotacticity (pentad fraction) of 95% or more,
- an atactic fraction of less than 5%,
- a density of 0.905 g/cm³ or more,
- a melting temperature of 164 °C or more, and
- a crystallization temperature of 125 °C or more.

Applicants respectfully submit that Demeuse does not anticipate amended Claims 1, 4, and 7.

Applicants further submit that Demeuse does not teach or suggest a high crystalline polypropylene as recited in amended Claims 1, 4, and 7. Therefore the independent Claims 1, 4, and 7 are non-obvious in view of Demeuse as well.

For the foregoing reasons, Applicants request that the Examiner withdraws his rejection that Zimmerman and Demeuse anticipate amended Claims 1, 3, 4, and 7 and currently pending dependent Claims 2, 5, 6, 9, and 10. Applicants submit that amended Claims 1, 3, 4, and 7 and currently pending dependent Claims 2, 5, 6, 9, and 10 are not anticipated by Zimmerman or Demeuse. Reconsideration is respectfully requested.

The Applicant reserves the right to seek protection for any unclaimed subject matter either subsequently in the prosecution of the present case or in a divisional or continuation application.

The application is now in condition for allowance. Allowance of the application at an early date is respectfully requested.

This response amends Claims 1, 3-4, 7-8 and adds new Claims 22-26. The amendments that are described in the preceding sentence were done to more fully claim the invention and/or to improve the wording of the Claims and were not done to overcome rejections under 35 U.S.C. 112, to overcome the prior art or to overcome any other rejections or objections. The amendments that are described in the first sentence of this paragraph shall not be considered necessary to overcome the prior art, shall not be considered necessary to overcome rejections under 35 U.S.C. § 112, and shall not be considered necessary to overcome any other rejections or objections.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136 (a) requesting an extension of time of the number of months necessary to make this response timely filed. The petition fee due in connection therewith may be charged to deposit account no. 12-0415.

I hereby certify that this correspondence is being deposited with the United States Post Office with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450 on

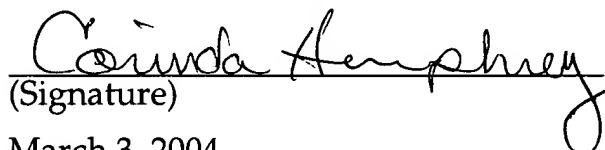
Respectfully submitted,

March 3, 2004

(Date of Deposit)

Corinda Humphrey

(Name of Person Signing)


(Signature)

March 3, 2004

(Date)



Richard P. Berg
Attorney for Applicants
Reg. No. 28,145
LADAS & PARRY
5670 Wilshire Boulevard, Suite 2100
Los Angeles, California 90036
(323) 934-2300